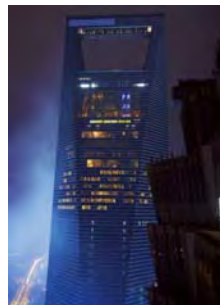


Agility in IT outsourcing

Second Company – IT business solutions



Even voorstellen

- Hans Dekkers
 - 1970, Amsterdam
 - Drs Informatica / Software Engineering
 - VU / UvA
 - CV
 - Software Engineer since 1994
 - Technical project lead since 1997
 - Interim manager, project manager since 1999
 - UvA since 2004
 - Director at Second Company since 2008
 - Expertise: software process en organisation; change management; requirements engineering; software quality
 - KPN, UPC, Telfort, ING, Postbank, ABN, Robeco, Extra-Clearing, SNT, Politie Amsterdam-Amstelland, KIT, Unipress



Software Engineering at the UvA

- One year program
 - compares with program of Carnegie-Mellon
- Problem oriented education
- 7 courses:
 - Requirements, Architecture, Design, Construction, Testing
 - Evolution
 - Process
- Paper sessions
 - building research competences throughout the programme
- Literature study + master project
- After: **practice** or **PhD**



UNIVERSITEIT VAN AMSTERDAM



vrije Universiteit amsterdam

Overcoming communication problems in off shore outsourcing

- Sebastiaan Herman
 - 1977, Haarlem
 - Drs. Software Engineering
 - UvA
 - CV
 - Software engineer since 1995
 - Software architect since 2007
 - Director at Second Company since 2008
 - Expertise: Business IT Alignment, Web development, Coaching offshore development teams, SOA, Business Process Engineering
 - eBay, Getronics, Paydutch, Timegrip, Extrea Webservices, IT Intelligence, Mindbus



27-04-2009 11:20 | Door [Kim de Vries](#) | Tags: [Crisis](#) | Gerelateerde bedrijven: [ICT~Office](#) | Er zijn [44 reacties](#) op dit artikel | [Permalink](#)

Tekort aan ICT'ers blijft bestaan

Hoewel de huidige economische crisis zorgt voor ontspanning op de ict-arbeidsmarkt, is er ook in 2009 een tekort aan hoger opgeleide ict'ers. Dit blijkt uit de ict-marktmonitor van branchevereniging ICT~Office. Bovendien blijft het tekort de komende jaren groeien, doordat de vraag naar arbeidskrachten sterker stijgt dan de instroom van nieuwe ict'ers op de arbeidsmarkt. In 2013 verwacht de branchevereniging een tekort van 5950 ict'ers.



Ondanks de economische [crisis](#) blijft het tekort aan hoogopgeleide ict'ers de komende jaren groeien. Terwijl in 2009 bijna duizend extra hoogopgeleide ict'ers nodig zijn, wordt in 2013 een tekort van 5950 krachten verwacht. Dit blijkt uit de marktmonitor van branchevereniging ICT~Office.

De economische situatie zorgt op dit moment voor tijdelijke ontspanning op de ict-arbeidsmarkt. In 2011 is het tekort in ict'ers naar verwachting echter alweer gestegen naar 2650. Bovendien neemt de instroom van ict'ers op de arbeidsmarkt af. Terwijl er in 2009 nog 4250 ict'ers instromen, zijn dit er in 2013 naar verwachting nog maar 3850. Het tekort aan hoogopgeleide ict'ers wordt volgens [ICT~Office](#) veroorzaakt door een afname van instroom van jongeren naar ict-opleidingen.

Why does it go wrong

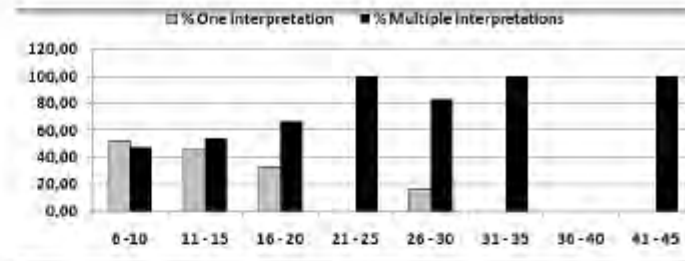
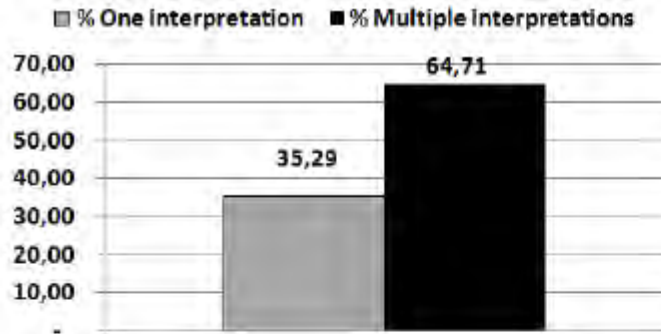
- Some of the reasons:
 - Communication and cultural problems
 - Volatile and vague requirements
 - Lack of quality
 - Poor planning
 - Lack of domain knowledge
 -
- Remarkable
 - Failing to achieve financial benefits: overhead in communication, control and coordination costs
 - Waterfall method
 - Heavily specified

Clear and detailed specifications

Part of the solution
or
part of the problem?



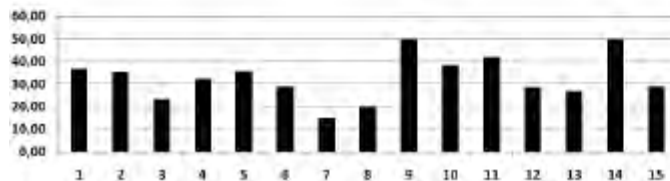
Inherently ambiguous



Different interpretations by panel of 3

	Requirements
Zero ambiguity types	20
One ambiguity type	46
Two ambiguity types	31
Three ambiguity types	5

Ambiguity detected by a checklist



Ambiguity detected by tool: Alpino

Problems in requirements

- Volatility
- Incomplete, faulty, ambiguous
- Hard to assess quality
- Overwhelming
- Feasibility
- Expensive



Vision

Google to Open Research and Development Center in China

MOUNTAIN VIEW, Calif. – July 19, 2005 – Google Inc. (NASDAQ: GOOG)

SAP: Establishing a Research Centre in China

by **Kuldeep Kumar**, **Maya Kumar**, **Markus Alsleben**

27 pages. Publication date: Feb 19, 2009. Prod. #: HKU817-PDF-ENG

IBM Opens New Center In China To Drive The Development Of High Tech Railroads

Industry Leaders Rally to Modernize Passenger and Freight Railroad Systems

Siemens to establish 3G software R&D center in China's Hangzhou

Oracle Opens New Centers in China

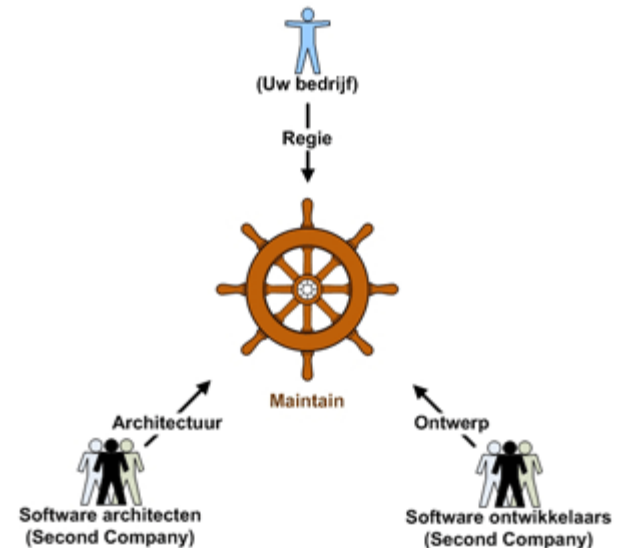
UPDATE: The software giant looms large behind the Great Wall with a second developer's center in Beijing and a business development center in Shanghai.

Fully use intellectual capacity developers

- We can't do without
 - Find problems in specifications
 - Detailed design
 - Coming up with alternatives
 - Filling in the blanks
- They need to be empowered
 - Domain knowledge
 - Overview
 - Interaction moments
 - Appropriate tasks
 - Freedom to make mistakes
 - Stimulated to contribute

Rados: roles

- Developer:
 - Masters the technical domain
 - Thinks about functionality
 - Understand the need for a solution
- Customer:
 - Problem owner
 - Set of requirements
 - Stakeholders
 - Possible: legacy, API, architecture, design
- Architect:
 - Aligns business and IT
 - Solution concept and framework
 - Coach



RADOS

Rapid Application Development Off Shore

- Project startup: constraints the project and sets conditions
 - Set up collaboration platform
 - Problem to solve, pricing, milestones
 - Customer involvement
- Plan: defines solution with development team
 - Starting point: Vision document including goal and domain description
 - Deliverable: prototype of the system to build
 - Deliverable: architecture of the system to build
- Collaborate: develop the software
 - Best practices: test infrastructure; iterative and incremental development; continuous build; product demos; measurement and reports
- Accept
 - Acceptance by customer
 - Deployment
 - Service

Thinking inside the box

- Lead by questions
- Constrain the creative space
 - Set goals
 - Timeline
 - Deliverables
 - Scope
- Accommodate for clear decision criteria
- Trust and space

Diagnose

- Every interaction builds insight
- Don't talk, but listen
- Ask questions
- Analyze:
 - Why is the solution not adequate?
 - Not able to judge quality of solution?
 - Work ethic?
 - Competence?
 - Task too complex?
 - Motivation?
 - Lack of trust, lack of confidence?

C'est le ton qui fait la musique but no music without a soul

- Architect
 - Determines constraints and sets clear rules
 - Task division
- Coach
 - Leads with questions
 - Motivates, clarifies
 - Rewards, pays attention, stimulates
 - Diagnoses
- Father
 - Situation specific
- Boss
 - Hire, fire

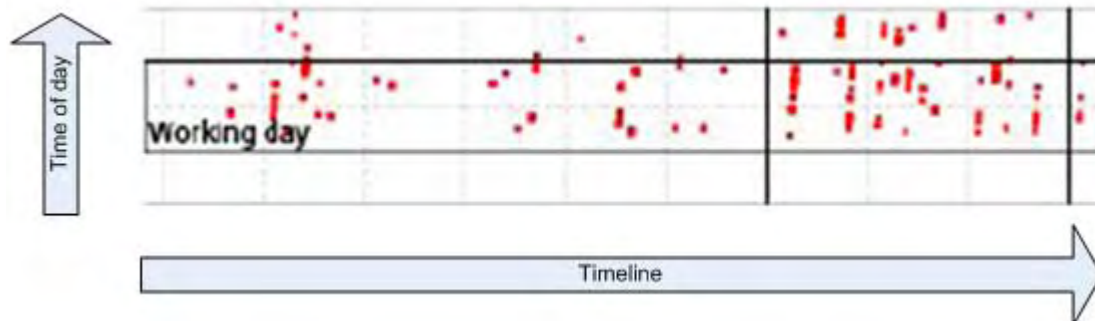
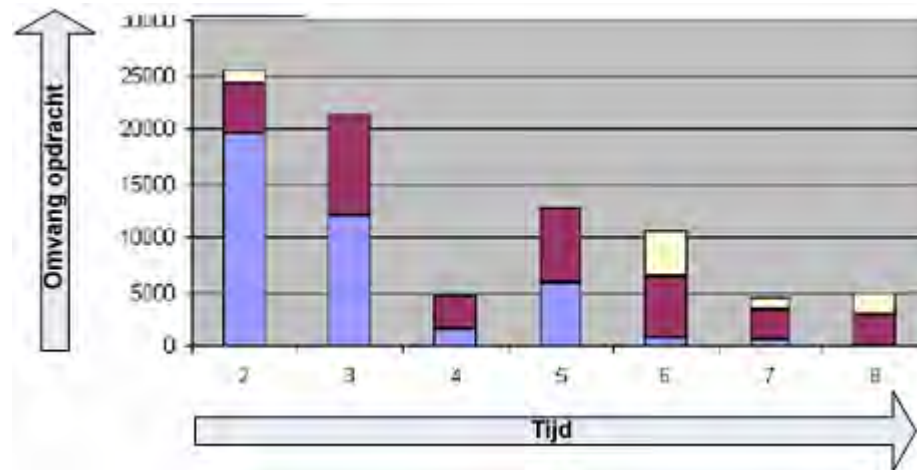
And?
Does it work?

Case Payment Provider

- Start:
 - Failed first project
 - Poor code quality
- Context:
 - 5 developers
 - 8 months
 - 80+ use cases
 - 700 kLOC
- Results
 - Successful application
 - Easily extendible and deployable framework
 - Empowered staff

Graduation project

Empirical results



Dialogue examples

Anecdote 1 – Ask questions instead of giving answers

- Offshore: Should the system charge a fee when a transaction expires and we return the money?
- Onsite: Since we reduced the risk for the customer that all his money is gone this would be reasonable. But on the other side, a customer is more likely to use our system when he gets all his money back when something went wrong.

Anecdote 2 - Offshore team helps solve functional issues

- Onsite: Can we implement generic openID. For example:
 1. Enter a URL
 2. Go to the openID provider
 3. Login using the openID provider.
- Offshore: It is possible, but some openID service providers have different formats of request and response. So we will only support OpenID 2.0. Besides, I don't think the user will understand how to input the correct provider's URL as it requires a fair amount of technical understanding.

Anecdote 3 - Offshore comes with ideas

- Offshore: I think the HelpDesk should have an unlock function, which can change the transaction status from Lock to Inspect or Retrieve or Compensate.
- Onsite: Unlock! Like a button somewhere that allows the helpdesk to provide this task when the users are not capable of doing this.
- Offshore: Yes, you get it!

Call management system

- Start:
 - Detailed specification on pseudo code level. Micro management.
 - Unsatisfied with quality of off shore team
 - Primary application knowledge and decisions in NI
- Context:
 - 5 architects in NI; 20 Developers in India
 - CMMi level 5 certified Indian development organization
 - 8 months
 - 10 year old system, big and complex 400+ tables / 1 MLOC
- Results pilot project
 - Downsize start documentation from 100 to 10 pages
 - Specifications developed in India
 - Outsourcing project management and testing
 - Empowered staff coming up with speedy and quality solution

Case internet advertisement

- Start:
 - Many complex problems
 - Unclear cause of problems
 - Unsatisfied with quality of supplier
 - Dependant on supplier
- Context:
 - Complex IT architecture.
 - Hard to reproduce and analyze problems.
 - Externally developed component collaborates through API
 - External software developers in NL.
 - 6 months
 - 3 year old system, 50 tables / 300 KLOC
- Results 6 months
 - Significant reduction of development time and effort
 - Problems have been resolved
 - Trust between off site developers restored

Summary

- Use capabilities of your off shore team to the fullest extent. We can't do without.
- Empower your team
- Constrain the creative space
- Get to the heart of things
- Intervene and redirect